**DARPA-BAA-15-13 EQUiPS**
**Frequently Asked Questions (FAQs)**
**as of 1/9/15**

17Q: In Phase II what will the successful teams be expected to do with the challenges the application team chooses?

17A: The purpose of the application team is to provide these challenges, design problems and in some ways metrics where research on some real application problems can be implemented. So yes, the idea is that in Phase II the successful teams will be working on the challenge problems that the application team will provide them. In the BAA, this process has been explained, and the process will become more clear in the course of the program. The moment the program gets started the work of the application team is going to also start so this is going to be an evolving process, but the successful teams definitely will have a very clear idea of what to do with the challenges the application team will provide.

16Q: Program manager went out of her way to mention that this is a math program, not an engineering program. Could DARPA give examples of what types of efforts are engineering efforts and are not of interest to the program?

16A: There is nothing wrong with having an engineering program, but the point is to emphasize that the focus of the program would be on development of mathematical ideas. As Director Tompkins mentioned, we have different offices at DARPA and some work on systems-level complex engineering problems. In offices like DSO which support basic and fundamental research that could even be in the engineering realm, the work will not be on systems engineering with a focus on integration of existing tools in new application domains. So for a math program like EQUiPS the idea is not for performers to put together existing tools and basically come up with their own software and framework to apply to a challenge problem or a test case. That's what I would consider an engineering problem. As a math program and a basic research program, what I would like is for people to start looking at developing new ideas, new methodologies. That's what I would consider a math program and how to differentiate it from engineering which is more of a systems engineering approach.

15Q: How much funding has DARPA put aside for this program for Phase I and Phase II?

15A: Per the BAA for entire program, the total budget available for award is approximately $27M but the actual funding structure is not going to be made available.

14Q: How is the application team formed?

14A: It's a DARPA application team. It's a team that the PM will be forming so DARPA is responsible for this. It's not chosen by the proposers, but the challenge problems that the application team will consider are going to be based on the test cases that the proposers submit.

13Q: Do we have to have the physical system to do real experiments? For example, if you study power grids do we need to get results from real power grids or can we use a simulation to test it?

13A: If you can consider real systems where you can actually get data in order to perform validation, that would be fantastic. But we all know that for real systems getting data is not going to be possible for researchers, so I'm not going to make that mandatory. In fact, that's one of the reasons that I said very specifically that the test cases we're going to be looking at are going to change in complexity for Phase I and Phase II, meaning that it's not my expectation that you will be able to consider it a real complex system in Phase I and even in Phase II. Of course if you can have data to do any kind of validation that's a plus, but we all know that in most cases that's not a possibility.

12Q: Are foreign nationals eligible to participate and receive funding through EQUiPS?

12A: Yes, they are eligible to participate per BAA section III.A.

11Q: What is the minimum and maximum funding of individual awards?

11A: Per the BAA, section II.A., The level of funding for individual awards made under this solicitation has not been predetermined and will depend on the quality of the proposals received and the availability of funds. As Mr. Mutty mentioned, cost analysis is going to be an important part of this review. The funding level that you're requesting should match the technical research that you are proposing so this is what we're going to be looking into.

10Q: What are the lower and upper bounds on team sizes and budget?

10A: The teams should be large enough to have the expertise to address all the technical challenges that the BAA poses. The guideline is to have the right team that can handle the technical work, but think also about the fact that having a very large team will require a lot more time in terms of management of the team. PM's preference is that PIs spend more time performing the research and doing the science instead of managing a large team. So just keep that in mind.

9Q: Could you please repeat the expected timeline, like announcements of the BAA due date?

9A: Per section IV.C. of the BAA (All times listed herein are Eastern Time):

-Posting Date: December 18, 2014
-Abstract Due Date: January 15, 2015, 4:00 p.m.
-FAQ Submission Deadline: February 18, 2015, 4:00 p.m.
-Full Proposal Due Date: February 25, 2015, 4:00 p.m.

8Q: What is the page limit on the white paper and full proposal?

8A: The BAA has very clear guidelines about the page limit, format, and other guidelines. See section IV.B.1 for Abstract guidelines and section IV.B.2 for Full Proposal guidelines.

7Q: Should we submit a white paper or directly to full proposal?

7A: It is highly encouraged that you submit a white paper first. This way you will get some feedback about your proposed work and I think getting that feedback is definitely valuable for working on the full proposal.

6Q: Mathematicians typically don't divide their work into well-defined cost tasks since, for example, it's difficult to tell how much time will be required for a proof. Can you speak to how to think about task breakdown and statement of work for more mathematical aspects of the work?

6A: As I mentioned in my remarks I do expect rigorous mathematical analysis for this work which I hope can ultimately be transitioned to industry. I'm aware that it may be difficult to come up with a very precise timeline and even cost for performing mathematical research, but this is actually always standard practice for proposal writing for mission-oriented funding agencies. We definitely take that into account that you may not be able to say, for example, that you will give one week to prove this theorem but at the same time we think that with the guidelines provided in the BAA you will have an idea of how you can come up with some sort of a time estimate for the mathematical research.

5Q: Are Department of Energy National Labs eligible to participate in the EQUiPS BAA?

5A: There is no issue with this. They are still eligible and the BAA has a section (III.A) that discusses eligibility criteria for engagement of DOE laboratory researchers.

4Q: Can you speak to the size and quantity of potential awards?

4A: Per the BAA, DARPA anticipates 5-10 total multidisciplinary teams. The level of funding for individual awards made under this solicitation has not been predetermined and will depend on the quality of the proposals received and the availability of funds. We know it's an important question because it affects the way you think of teaming and the size of your team.

3Q: Is it okay to partner with non-U.S. entities?

3A: Yes. See section III.A of BAA for more information regarding participation of non-U.S. entities. This program is basic research, so there is no issue with participation of non-U.S. entities as long as participants comply with any necessary nondisclosure agreements, security regulations, export control laws, and other governing statutes applicable under the circumstances.

2Q: Are quantum information science-related algorithms used for physical modeling and simulation consistent with the spirit of the BAA?

2A: Quantum information science-related algorithms are not necessarily a focus area of the BAA, but if the proposers can make a case that these algorithms can be used for UQ then certainly, there is no issue with that.

1Q: Has there been some seedling or related prior work done in preparation for this BAA?

1A: No.